

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

International Application No.: PCT/NO00/00200  
 International Filing Date: 8 June 2000  
 Applicants: Geir Olve Skeie et al.  
 Serial No: 10/009,013  
 TITLE: Detection of Ryanodione Receptor Antibodies

Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 2213-1450

**RESPONSE TO NOTIFICATION OF DEFECTIVE RESPONSE**

Sir:

In response to the Notification of Defective Response dated October 22, 2004 enclosed are the following:

Copy of Notification of Defective Response

A substitute computer readable form of the "Sequence Listing"

A diskette of the "Sequence Listing"

An Amendment directing entry of the substitute paper copy of the "Sequence Listing" into the specification.

A statement that the contents of the paper copy of the Sequence Listing contains a correction of <213> and otherwise includes no new matter.

**FIRST CLASS CERTIFICATE**

I hereby certify that this correspondence is being deposited today with the U.S. Postal Service as First Class Mail in an envelope addressed to:

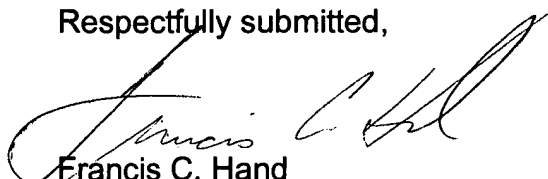
Commissioner for Patents  
 P.O. Box 1450  
 Alexandria, VA 2213-1450

Francis C. Hand, Esq.

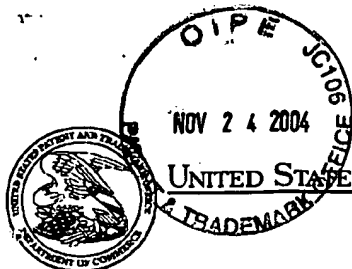
Date

11-22-2004

Respectfully submitted,

  
 Francis C. Hand  
 Reg. No. 22,280

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UNITED STATES PATENT AND TRADEMARK OFFICE

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U.S. APPLICATION NUMBER NO. 10/009,013	FIRST NAMED APPLICANT Geir Olve Skeie	ATTY. DOCKET NO. 53550.40
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INTERNATIONAL APPLICATION NO. PCT/NO00/00200
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I.A. FILING DATE 06/08/2000	PRIORITY DATE 06/08/1999
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Francis C Hand  
Carella Byrne Gilfillan Cecchi Stewart & Olstein  
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Roseland, NJ 07068

CONFIRMATION NO. 2173

371 FORMALITIES LETTER



\*OC000000014167868\*

Date Mailed: 10/22/2004

## NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- Indication of Small Entity Status
- Priority Document
- Copy of the International Application filed on 12/06/2001
- Copy of the International Search Report filed on 12/06/2001
- Copy of IPE Report filed on 12/06/2001
- Biochemical Sequence Diskette filed on 06/17/2002
- Oath or Declaration filed on 08/19/2004
- Biochemical Sequence Listing filed on 08/19/2004
- Request for Immediate Examination filed on 12/06/2001
- Copy of references cited in ISR filed on 12/06/2001
- U.S. Basic National Fees filed on 12/06/2001
- Priority Documents filed on 12/06/2001

DATE RECEIVED:	10-24-04
DATE ENTERED:	11-04-04
1) Response Due	
2)	
3) 11-22-04	
4)	
NO EXTENSIONS ALLOWED	
EXAMINED BY:	PM
DATE:	10-25-04

Applicant's response filed 08/19/2004 is hereby acknowledged. The following requirements set forth in the NOTIFICATION of MISSING REQUIREMENTS mailed 04/22/2004 have not been completed.

The following items **MUST** be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):
  - A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of Annex C of the Administrative Instructions and 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
  - APPLICANT MUST PROVIDE:
    - An initial or substitute computer readable form (CRF) of the "Sequence Listing."
    - An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.

- A statement that the contents of the paper or compact disc and the computer readable form are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e), 1.821(f), 1.821(g), 1.825(b) or 1.825(d).
- For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:
  - For Rules Interpretation, call (703) 308-4216
  - To Purchase PatentIn Software, call (703) 306-2600
  - For PatentIn Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov

**Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).**

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

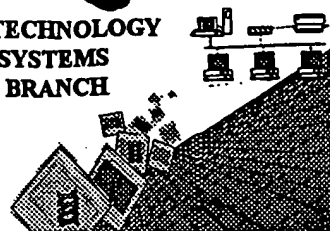
*A copy of this notice **MUST** be returned with the response.*

KAREN M WILLIAMS

Telephone: (703) 305-3688

**PART 1 - ATTORNEY/APPLICANT COPY**

U.S. APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/009,013	PCT/NO00/00200	53550.40



## RAW SEQUENCE LISTING ERROR REPORT

DT03 Rec'd PCT/PTO 24 NOV 2004

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/009,013 B  
Source: Pg 1/10  
Date Processed by STIC: 9/13/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 571-272-2510; FAX: 571-273-0221

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER  
VERSION 4.2 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkrnote.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<http://www.uspto.gov/ebc/efs/downloads/documents.htm>) , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry, Federal Express, United Parcel Service, or other delivery service (EFFECTIVE 06/05/04):  
U.S. Patent and Trademark Office, 220 20<sup>th</sup> Street S., Customer Window, Mail Stop Sequence, Crystal Plaza Two, Lobby,  
Room 1B03, Arlington, VA 22202

Revised 05/17/04

## Raw Sequence Listing Error Summary

### ERROR DETECTED

### SUGGESTED CORRECTION

SERIAL NUMBER:

10/009,013B

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1      Wrapped Nucleics  
    Wrapped Aminos     The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
  
- 2      Invalid Line Length     The rules require that a line not exceed 72 characters in length. This includes white spaces.
  
- 3      Misaligned Amino  
    Numbering     The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
  
- 4      Non-ASCII     The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
  
- 5      Variable Length     Sequence(s)      contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
  
- 6      PatentIn 2.0  
    "bug"     A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s)     . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
  
- 7      Skipped Sequences  
    (OLD RULES)     Sequence(s)      missing. If intentional, please insert the following lines for each skipped sequence:  
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
 (xi) SEQUENCE DESCRIPTION: SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
 This sequence is intentionally skipped  
  
 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
  
- 8      Skipped Sequences  
    (NEW RULES)     Sequence(s)      missing. If intentional, please insert the following lines for each skipped sequence.  
 <210> sequence id number  
 <400> sequence id number  
 000
  
- 9      Use of n's or Xaa's  
    (NEW RULES)     Use of n's and/or Xaa's have been detected in the Sequence Listing.  
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
 In <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.
  
- 10      Invalid <213>  
    Response     Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
  
- 11      Use of <220>  
 FYI → Sequence(s)      missing the <220> "Feature" and associated numeric identifiers and responses.  
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
  
- 12      PatentIn 2.0  
    "bug"     Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
  
- 13      Misuse of n/Xaa     "n" can only represent a single nucleotide; "Xaa" can only represent a single amino acid



PCT

## RAW SEQUENCE LISTING

DATE: 09/13/2004

PATENT APPLICATION: US/10/009,013B

TIME: 09:43:16

Input Set : A:\PCT,NO00,00200.ST25.txt

Output Set: N:\CRF4\09132004\J009013B.raw

3 <110> APPLICANT: Skeie, Geir Olve  
 5 <120> TITLE OF INVENTION: Detection of Ryanodione Receptor Antibodies  
 7 <130> FILE REFERENCE: PCT/NO00/00200  
 9 <140> CURRENT APPLICATION NUMBER: US 10/009,013B  
 C--> 10 <141> CURRENT FILING DATE: 2001-12-06  
 12 <160> NUMBER OF SEQ ID NOS: 2  
 14 <170> SOFTWARE: PatentIn version 3.3  
 16 <210> SEQ ID NO: 1  
 17 <211> LENGTH: 374  
 18 <212> TYPE: PRT  
 19 <213> ORGANISM: Protein for the detection of ryanodione receptor antibodies  
 21 <400> SEQUENCE: 1  
 23 Glu Phe Lys Phe Leu Pro Pro Pro Gly Tyr Ala Pro Cys His Glu Ala  
 24 1 5 10 15  
 27 Val Leu Pro Arg Glu Arg Leu Arg Leu Glu Pro Ile Lys Glu Tyr Arg  
 28 20 25 30  
 31 Arg Glu Gly Pro Arg Gly Pro His Leu Val Gly Pro Ser Arg Cys Leu  
 32 35 40 45  
 35 Ser His Thr Asp Phe Val Pro Cys Pro Val Asp Thr Val Gln Ile Val  
 36 50 55 60  
 39 Leu Pro Pro His Leu Glu Arg Ile Arg Glu Lys Leu Ala Glu Asn Ile  
 40 65 70 75 80  
 43 His Glu Leu Trp Ala Leu Thr Arg Ile Glu Gln Gly Trp Thr Tyr Gly  
 44 85 90 95  
 47 Pro Val Arg Asp Asp Asn Lys Arg Leu His Pro Cys Leu Val Asn Phe  
 48 100 105 110  
 51 His Ser Leu Pro Glu Pro Glu Arg Asn Tyr Asn Leu Gln Met Ser Gly  
 52 115 120 125  
 55 Glu Thr Leu Lys Thr Leu Leu Ala Leu Gly Cys His Val Gly Met Ala  
 56 130 135 140  
 59 Asp Glu Lys Ala Glu Asp Asn Leu Lys Lys Thr Lys Leu Pro Lys Thr  
 60 145 150 155 160  
 63 Tyr Met Met Ser Asn Gly Tyr Lys Pro Ala Pro Leu Asp Leu Ser His  
 64 165 170 175  
 67 Val Arg Leu Thr Pro Ala Gln Thr Thr Leu Val Asp Arg Leu Ala Glu  
 68 180 185 190  
 71 Asn Gly His Asn Val Trp Ala Arg Asp Arg Val Ala Gln Gly Trp Ser  
 72 195 200 205  
 75 Tyr Ser Ala Val Gln Asp Ile Pro Ala Arg Arg Asn Pro Arg Leu Val  
 76 210 215 220  
 79 Pro Tyr Arg Leu Leu Asp Glu Ala Thr Lys Arg Ser Asn Arg Asp Ser  
 80 225 230 235 240  
 83 Leu Cys Gln Ala Val Arg Thr Leu Leu Gly Tyr Gly Tyr Asn Ile Glu

1-2  
 Does Not Comply  
 Corrected Diskette Needed

see item 10 on Error Summary Sheet

## RAW SEQUENCE LISTING

DATE: 09/13/2004

PATENT APPLICATION: US/10/009,013B

TIME: 09:43:16

Input Set : A:\PCT,N000,00200.ST25.txt

Output Set: N:\CRF4\09132004\J009013B.raw

```

84          245          250          255
87 Pro Pro Asp Gln Glu Pro Ser Gln Val Glu Asn Gln Ser Arg Trp Asp
88          260          265          270
91 Arg Val Arg Ile Phe Arg Ala Glu Lys Ser Tyr Thr Val Gln Ser Gly
92          275          280          285
95 Arg Trp Tyr Phe Glu Phe Glu Ala Val Thr Thr Gly Glu Met Arg Val
96          290          295          300
99 Gly Trp Ala Arg Pro Glu Leu Arg Pro Asp Val Glu Leu Gly Ala Asp
100 305          310          315          320
103 Glu Leu Ala Tyr Val Phe Asn Gly His Arg Gly Gln Arg Trp His Leu
104          325          330          335
107 Gly Ser Glu Pro Phe Gly Arg Pro Trp Gln Ser Gly Asp Val Val Gly
108          340          345          350
111 Cys Met Ile Asp Leu Thr Glu Asn Thr Ile Ile Phe Thr Leu Asn Gly
112          355          360          365
115 Glu Val Leu Met Ser Asp
116          370
119 <210> SEQ ID NO: 2
120 <211> LENGTH: 348
121 <212> TYPE: PRT
122 <213> ORGANISM: Protein for the detection of ryanodione receptor antibodies
124 <400> SEQUENCE: 2
126 Arg Gly Arg Ser Leu Thr Lys Ala Gln Arg Asp Val Ile Glu Asp Cys
127 1          5          10          15
130 Leu Met Ala Leu Cys Arg Tyr Ile Arg Pro Ser Met Leu Gln His Leu
131          20          25          30
134 Leu Arg Arg Leu Val Phe Asp Val Pro Ile Leu Asn Glu Phe Ala Lys
135          35          40          45
138 Met Pro Leu Lys Leu Leu Thr Asn His Tyr Glu Arg Cys Trp Lys Tyr
139          50          55          60
142 Tyr Cys Leu Pro Thr Gly Trp Ala Asn Phe Gly Val Thr Ser Glu Glu
143 65          70          75          80
146 Glu Leu His Leu Thr Arg Lys Leu Phe Trp Gly Ile Phe Asp Ser Leu
147          85          90          95
150 Ala His Lys Lys Tyr Asp Gln Glu Leu Tyr Arg Met Ala Met Pro Cys
151          100          105          110
154 Leu Cys Ala Ile Ala Gly Ala Leu Pro Pro Asp Tyr Val Asp Ala Ser
155          115          120          125
158 Tyr Ser Ser Lys Ala Glu Lys Lys Ala Thr Val Asp Ala Glu Gly Asn
159          130          135          140
162 Phe Asp Pro Arg Pro Val Glu Thr Leu Asn Val Ile Ile Pro Glu Lys
163 145          150          155          160
166 Leu Asp Ser Phe Ile Asn Lys Phe Ala Glu Tyr Thr His Glu Lys Trp
167          165          170          175
170 Ala Phe Asp Lys Ile Gln Asn Asn Trp Ser Tyr Gly Glu Asn Val Asp
171          180          185          190
174 Glu Glu Leu Lys Thr His Pro Met Leu Arg Pro Tyr Lys Thr Phe Ser
175          195          200          205
178 Glu Lys Asp Lys Glu Ile Tyr Arg Trp Pro Ile Lys Glu Ser Leu Lys

```

## RAW SEQUENCE LISTING

DATE: 09/13/2004

PATENT APPLICATION: US/10/009,013B

TIME: 09:43:16

Input Set : A:\PCT,NO00,00200.ST25.txt

Output Set: N:\CRF4\09132004\J009013B.raw

```

179      210      215      220
182 Ala Met Ile Ala Trp Glu Trp Thr Ile Glu Lys Ala Arg Glu Gly Glu
183 225      230      235      240
186 Glu Glu Arg Thr Glu Lys Lys Lys Thr Arg Lys Ile Ser Gln Thr Ala
187      245      250      255
190 Gln Thr Tyr Asp Pro Arg Glu Gly Tyr Asn Pro Gln Pro Pro Asp Leu
191      260      265      270
194 Ser Gly Val Thr Leu Ser Arg Glu Leu Gln Ala Met Ala Glu Gln Leu
195      275      280      285
198 Ala Glu Asn Tyr His Asn Thr Trp Gly Arg Lys Lys Lys Gln Glu Leu
199      290      295      300
202 Glu Ala Lys Gly Gly Gly Thr His Pro Leu Leu Val Pro Tyr Asp Thr
203 305      310      315      320
206 Leu Thr Ala Lys Glu Lys Ala Arg Asp Arg Glu Lys Ala Gln Glu Leu
207      325      330      335
210 Leu Lys Phe Leu Gln Met Asn Gly Tyr Ala Val Thr
211      340      345

```



**VERIFICATION SUMMARY**

**PATENT APPLICATION: US/10/009,013B**

**DATE: 09/13/2004**

**TIME: 09:43:17**

**Input Set : A:\PCT,NO00,00200.ST25.txt**

**Output Set: N:\CRF4\09132004\J009013B.raw**

**L:10 M:271 C: Current Filing Date differs, Replaced Current Filing Date**

**BEST AVAILABLE COPY**